

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant(s):** Keith Kang and John Trezza

**Serial No.:** To Be Assigned

**Prior Group Art Unit:** 2839

**Filed:** April 2, 2004

**Prior Examiner:** Khiem M. Nguyen

**For:** INTEGRATION OF FUSED GLASS COLLIMATED  
COUPLER FOR USE IN OPTO-ELECTRONIC MODULES

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313

Sir:

This Information Disclosure Statement is filed in accordance with 37 C.F.R. §§1.56, 1.97 and 1.98. The items listed on Form PTO-1449, a copy of which is enclosed, are made of record to assist the Patent and Trademark Office in its examination of this application. The Examiner is respectfully requested to fully consider the items and to independently ascertain their teaching.

1. ☐ For each of the following items listed on the enclosed copy of Form PTO-1449 that is not in the English language, an English language translation of that item or a portion thereof or a concise explanation of the relevance of that item is enclosed:  

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2. ☐ For each of the items listed on the enclosed copy of Form PTO-1449 that is not in the English language, a concise explanation of the relevance of that item is incorporated in the specification of the above-identified application.
3. ☒ All items listed on the enclosed copy of Form PTO-1449 were previously cited by or submitted to the Patent and Trademark Office in application Serial No. 10/180,239, filed 6/26/2002 to which the present application claims the benefit of priority under 35 U.S.C. §120. Pursuant to 37 C.F.R. §1.98(d)(1) and (2) copies of such references need not be provided.


4. ☒ No fee is due under 37 C.F.R. §1.17(p) for this Information Disclosure Statement since it is being filed in compliance with:
- ☒ 37 C.F.R. §1.97(b)(1), within three months of the filing date of a national application other than a CPA; or
  - ☐ 37 C.F.R. §1.97(b)(2), within three months of the date of entry into the national stage as set forth in §1.491 in an international application; or
  - ☒ 37 C.F.R. §1.97(b)(3), before the mailing date of a first Office action on the merits; or
  - ☐ 37 C.F.R. §1.97(b)(4) before the mailing date of a first Office Action after the filing of an RCE under §1.114.
5. ☐ No fee is due under 37 C.F.R. §1.17(p) for this Information Disclosure Statement since it is being filed in compliance with 37 C.F.R. §1.97(c), after the period specified in paragraph 4 above but before the mailing date of a final action or a Notice of Allowance (where there has been no prior final action), and is accompanied by one of the certifications pursuant to 37 C.F.R. §1.97(e) set forth in paragraph 9 below.
6. ☐ A fee is due under 37 C.F.R. §1.17(p) for this Information Disclosure Statement since it is being filed in compliance with 37 C.F.R. §1.97(c), after the period specified in paragraph 4 above but before the mailing date of a final action or a notice of allowance (where there has been no prior final action):
- ☐ A check in the amount of \$180.00 is enclosed in payment of the fee.
  - ☐ Charge the fee to Deposit Account No. 13-4500, Order No. \_\_\_\_\_.  
A DUPLICATE COPY OF THIS SHEET IS ATTACHED.
7. ☐ A fee is due under 37 C.F.R. §1.17(p) for this Information Disclosure Statement since it is being filed in compliance with 37 C.F.R. §1.97(d), after the mailing date of a final action or a notice of allowance, whichever comes first, but before payment of the issue fee, and is accompanied by:
- a. one of the certifications pursuant to 37 C.F.R. §1.97(e) set forth in paragraph 9 below; and
  - b. the fee due under 37 C.F.R. §1.17(p) which is paid as set forth in paragraph 11 below.
8. ☐ A fee is due under 37 C.F.R. §1.17(p) for this Information Disclosure Statement since it is being filed in compliance with:
- a. ☐ 37 C.F.R. §1.313(b)(3) or §1.313(c)(1), after the issue fee has been paid and information cited in this Information Disclosure Statement may render at least one claim unpatentable and is accompanied by the attached Petition To Withdraw Application From Issue and fee pursuant to 37 C.F.R. §1.17(h);

- b. ☐ 37 C.F.R. §1.313(c)(2) or §1.313(c)(3), after the issue fee has been paid and information cited in this Information Disclosure Statement is to be considered in a Request for Continued Examination (RCE) or a Continuation application upon abandonment of the instant application and is accompanied by the attached Petition To Withdraw Application From Issue and fee pursuant to 37 C.F.R. §1.17(h).
- c. ☐ The fees due under 37 C.F.R. §§1.17(h) and 1.17(p) are paid as set forth in paragraph 11 below.
9. ☐ I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- ☐ I hereby certify that no item of information in the Information Disclosure Statement filed herewith was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
10. ☐ This document is accompanied by ☐ a Search Report ☐ Communication which was cited in a corresponding ☐ PCT or ☐ Foreign counterpart application
11. ☐ A check in the amount of \$\_\_\_\_\_ is enclosed in payment of the fees due under 37 C.F.R. §§1.17(h) and 1.17(p).
- ☐ Charge the fees due under 37 C.F.R. §§1.17(h) and 1.17(p) to Deposit Account No. 13-4500, Order No. 4024-4020. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required for this Information Disclosure Statement, or credit any overpayment to Deposit Account No. 13-4500, Order No. 4024-4011US2. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,

MORGAN & FINNEGAN, L.L.P.

By:

  
Richard Straussman  
Registration No. 39,847

Dated: April 2, 2004

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- b. ☐ 37 C.F.R. §1.313(c)(2) or §1.313(c)(3), after the issue fee has been paid and information cited in this Information Disclosure Statement is to be considered in a Request for Continued Examination (RCE) or a Continuation application upon abandonment of the instant application and is accompanied by the attached Petition To Withdraw Application From Issue and fee pursuant to 37 C.F.R. §1.17(h).
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<b>FORM PTO-1449</b>  <b>INFORMATION DISCLOSURE CITATION</b>	Attorney Docket: <b>4024-4011US2</b>	Serial No.: <b>To Be Assigned</b>
	Applicant: <b>Keith Kang and John Trezza</b>	
	Filing Date: <b>April 2, 2004</b>	Group Art Unit: <b>To Be Assigned</b>

### U.S. PATENT DOCUMENTS

Examiner Initial	Patent Number	Issue Date	Name	Class	Sub-Class	Filing Date
	3,825,318		Croset et al.			August 10, 1972
	4,230,385		Ammon et al.			February 6, 1979
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### FOREIGN PATENT DOCUMENTS

Examiner Initial	Patent Number	Publication Date	Country	Class	Sub-Class	Translation

### OTHER DOCUMENTS

Ayliffe, M.H., "Optomechanical, electrical and thermal packaging of large 2D optoelectronic device arrays for free-space optical interconnects", <i>SPIE</i> , Vol. 3490, pages 502-505.
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Examiner	Date Considered
<b>EXAMINER:</b> Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.	

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	Cryan, C.V., "Two-dimensional multimode fibre array for optical interconnects", <i>IEEE Electronic Letters Online No.</i> 19980073, October 23, 1997.
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**OTHER DOCUMENTS (continued)**

	Hayashi T. and Tsunetsugu H, "Optical Module with MU Connector Interface Using Self-alignment Technique by Solder-bump Chip Bonding", Electronic Components and Technology Conference, page 13-19, 1996.
	Ishida, H. et al., "Two-dimensionally arranged 24-fiber optical connectors", <i>OFC '97 Technical Digest</i> , pages 189-190, 1997.
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	Sasian, J. et al., "Fabrication of fiber bundle arrays for free-space photonic switching systems", <i>Optical Engineer</i> , Volume 33, No. 9, pages 2979-2985, September 1994.
	Söchtig, J. et al., "Replicated Plastic Optical Components for Optical Micro Systems", <i>IEEE</i> , pages 37 and 38, 1998.

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Tooley, F., "Challenges in Optically Interconnecting Electronics", <i>IEEE Journal Of Selected Topics In Quantum Electronics</i> ", Vol. 2, No. 1, pages 3-13, April 1996.
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